Issuance Date: September 30, 2004 Effective Date: October 1, 2004 Expiration Date: September 30, 2009

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM WASTE DISCHARGE PERMIT No. WA-002958-1

State of Washington
DEPARTMENT OF ECOLOGY
Northwest Regional Office
3190 – 160th Avenue SE
Bellevue, WA 98008-5452

In compliance with the provisions of
The State of Washington Water Pollution Control Law
Chapter 90.48 Revised Code of Washington
and
The Federal Water Pollution Control Act
(The Clean Water Act)
Title 33 United States Code, Section 1251 et seq.

King County Wastewater Treatment Division King Street Center, KSC-NR-0512 Seattle, Washington 98104-3855

Plant Location:Receiving Water:King County South Treatment PlantPuget Sound

1200 Monster Rd. S.W. Renton, Washington 98055

Water Body I.D. No.:

Discharge Location:

WA - PS - 0240

Puget Sound

 Waterway Segment Number. No.:
 Lat.
 47° 36' 11.47"N
 47° 35' 57.44"N

 04-08-04 - Final
 Long.
 122° 25' 36.92"W
 122° 25' 37.60"W

 04-09-06 - Emergency/Maintenance
 Fmergency/Maintenance
 (Green River)

04-09-06 - Emergency/Maintenance <u>Emergency/Maintenance</u> (Green River)

Latitude: 47° 28' 07" N

Plant Type: Latitude: 47° 28' 07" N
Activated Sludge - (Secondary Treatment Plant) Longitude: 122° 17' 37" W

is authorized to discharge in accordance with the special and general conditions that follow.

Kevin C. Fitzpatrick Water Quality Section Manager Northwest Regional Office Washington State Department of Ecology

TABLE OF CONTENTS

SUN	ΛN	1ARY OF PERMIT REPORT SUBMITTALS4
		SPECIAL CONDITIONS
S1.		DISCHARGE LIMITATIONS 6
	А. В.	Effluent Limitations – Marine Outfall Effluent Limitations - Green River Outfall
	Б . С.	Mixing Zone Descriptions – Marine Outfall
	D.	Mixing Zone Descriptions – Green River Outfall
S2.		MONITORING REQUIREMENTS 9
1	A.	Monitoring Schedule
	В.	Sampling and Analytical Procedures
	C.	Flow Measurement
	D.	Laboratory Accreditation
S3.	٨	REPORTING AND RECORDKEEPING REQUIREMENTS 14
	А . В.	Reporting Records Retention
	Б. С.	Recording of Results
	D.	Additional Monitoring by the Permittee
	Ε.	Noncompliance Notification
I	F.	Maintaining a Copy of This Permit
(G.	Reporting - Shellfish Protection
S4.		FACILITY LOADING16
	A.	Design Criteria
	B.	Plans for Maintaining Adequate Capacity
	C.	Duty to Mitigate
	D. E.	Notification of New or Altered Sources
	E. F.	Infiltration and Inflow Progress Report Waste Load Assessment
S5.		OPERATION AND MAINTENANCE
	Α.	Certified Operator
	B.	O & M Program
(C.	Short-term Reduction
	D.	Electrical Power Failure
	Е.	Prevent Connection of Inflow
	F.	Bypass Procedures
(G.	Operations and Maintenance Manual
S6.		PRETREATMENT 22
	A.	General Requirements
	B.	Monitoring Requirements Reporting of Monitoring Results
	C.	Renorting at Maniforing Regults

S7.	RESIDUAL SOLIDS	27
S8.	ACUTE TOXICITY	27
A.		
B.	Sampling and Reporting Requirements	
S9.	CHRONIC TOXICITY	29
A.	Testing Requirements	2)
В.	Sampling and Reporting Requirements	
S10.	ADDITIONAL TESTING OF EFFLUENT	31
A.	Additional Chemical Analysis	
B.	Protocols	
C.	Quality Assurance/Quality Control Procedures	
S11.	OUTFALL EVALUATION	32
S12.	FLOW BLENDING	32
S13.	USE OF EFFLUENT RETURNED FOR DISCHARGE THROUGH THE	
510.	EFFLUENT TRANSFER SYSTEM	33
	GENERAL CONDITIONS	
C1		2.4
G1. G2.	SIGNATORY REQUIREMENTSRIGHT OF INSPECTION AND ENTRY	
G2. G3.	PERMIT ACTIONS	
G3. G4.	REPORTING PLANNED CHANGES	
G5.	PLAN REVIEW REQUIRED	
G6.	COMPLIANCE WITH OTHER LAWS AND STATUTES	
G7.	DUTY TO REAPPLY	
G8.	TRANSFER OF THIS PERMIT	
G9.	REDUCED PRODUCTION FOR COMPLIANCE	
G10.	REMOVED SUBSTANCES	
G11.	DUTY TO PROVIDE INFORMATION	
G12.	OTHER REQUIREMENTS OF 40 CFR	38
G13.	ADDITIONAL MONITORING	38
G14.	PAYMENT OF FEES	
G15.	PENALTIES FOR VIOLATING PERMIT CONDITIONS	38
G16.	UPSET	
G17.	PROPERTY RIGHTS	
G18.	DUTY TO COMPLY	
G19.	TOXIC POLLUTANTS	
G20.	PENALTIES FOR TAMPERING	
G21.	REPORTING ANTICIPATED NON-COMPLIANCE	
G22.	REPORTING OTHER INFORMATION	
(323	COMPLIANCE SCHEDIII ES	40

SUMMARY OF PERMIT REPORT SUBMITTALS

Refer to the Special and General Conditions of this permit for additional submittal requirements.

Permit Section	Submittal	Frequency	First Submittal Date
S3.	Discharge Monitoring Report	Monthly	November 20, 2004
S3.E	Noncompliance Notification	As necessary	
S3.G	Shellfish Protection	As necessary	
S4.B.	Plans for Maintaining Adequate Capacity	As necessary	
S4.D.	Notification of New or Altered Sources	As necessary	
S4.E	Inflow and Infiltration Update	Biennially	October, 1, 2005
S4.F.	Waste load Assessment	Annually	October 1, 2005
S5.G.	Operations and Maintenance Manual Update or Review Confirmation Letter	Annually	October 1, 2005
S6.A.5.	Pretreatment Report	Annually	June 30, 2005
S6.C.	Effluent Analysis Report	1/permit cycle	March 31, 2009
S8.A.	Acute Toxicity Characterization Data	4/permit cycle	March 31, 2008
		once/quarter	June 30, 2008
		during last year	September 30, 2008
			December 31, 2008
S8.A.	Acute Toxicity Tests Characterization Summary Report	1/permit cycle	March 31, 2009
S9.A	Chronic Toxicity Characterization Data	4/permit cycle	March 31, 2008
		once/quarter	June 30, 2008
		during last year	September 30, 2008
			December 31, 2008
S9.A	Chronic Toxicity Tests Characterization Summary Report	1/permit cycle	March 31, 2009
S11.	Outfall Evaluation	1/permit cycle	March 31, 2009
S13.	Flow Blending, monthly summary of events	As necessary with DMR submittal	

Permit Section	Submittal	Frequency	First Submittal Date
S13.	Flow Blending Report	1/permit cycle	March 31, 2009
S14.	Water Reuse, Approval of New Contract for Use	As necessary	
G1.C.	Notice of Change in Authorization	As necessary	
G4.	Reporting Planned Changes	As necessary	
G5.	Engineering Report for Construction or Modification Activities	As necessary	
G7.	Application for Permit Renewal	1/permit cycle	March 31, 2009
G21	Reporting Anticipated Noncompliance	As necessary	
G22	Reporting Other Information	As necessary	

SPECIAL CONDITIONS

S1. DISCHARGE LIMITATIONS

A. Effluent Limitations – Marine Outfall

All discharges and activities authorized by this permit shall be consistent with the terms and conditions of this permit. The discharge of any of the following pollutants more frequently than, or at a level in excess of, that identified and authorized by this permit shall constitute a violation of the terms and conditions of this permit.

Beginning on the effective date of this permit and lasting through the expiration date, the Permittee is authorized to discharge municipal wastewater at the permitted location subject to complying with the following limitations:

EFFLUENT LIMITATIONS ^a : OUTFALL # 1					
Parameter	Average Monthly	Average Weekly			
Biochemical Oxygen Demand ^b (BOD ₅)	30 mg/L, 36,000 lb/day 85% minimum removal	45 mg/L, 54,000 lb/day			
Total Suspended Solids ^b	30 mg/L, 36,000 lb/day 45 mg/L, 54,000 l				
	85% minimum removal				
Fecal Coliform Bacteria	200/100 mL 400/100 mL				
pH ^e	Daily minimum is equal to or greater than 6.0 and the daily maximum is less than or equal to 9.0.				
Parameter	Average Monthly Maximum Dail				
Total Residual Chlorine	0.5 mg/L, 600 lb/day 0.75 mg/L				
Footnotes:					

- ^a The average monthly and weekly effluent limitations are based on the arithmetic mean of the samples taken with the exception of fecal coliform, which is based on the geometric mean.
- b The average monthly effluent concentration for **BOD**₅ shall not exceed 30 mg/L or 15 percent of the respective monthly average influent concentrations, whichever is more stringent. The average monthly effluent concentration for **TSS** shall not exceed 30 mg/L or 15 percent of the respective monthly average influent concentrations, whichever is more stringent.
- c Indicates the range of permitted values. When pH is continuously monitored, excursions between 5.0 and 6.0, or 9.0 and 10.0 shall not be considered violations provided no single excursion exceeds 60 minutes in length and total excursions do not exceed 7 hours and 30 minutes per month. Any excursions below 5.0 and above 10.0 are violations. The instantaneous maximum and minimum pH shall be reported monthly.
- ^d The maximum daily effluent concentration determined from a continuous measurement is calculated as the average of the pollutant concentrations measured over the day.

B. <u>Effluent Limitations - Green River Outfall</u>

The Green River outfall is used for the emergency discharge of secondary treated effluent that has been disinfected and dechlorinated prior to discharge to the river. The Department permits such discharges under Special Condition S5.F. The outfall must be maintained periodically by flushing outfall diffuser with treated effluent to ensure that it operates normally in the event of an emergency. The Department recognizes that the occasional short-term discharge of treated wastewater to the Green River is necessary for maintenance of the outfall diffuser.

The use of the Green River outfall for maintenance purposes are permitted under the following conditions:

- 1. The Permittee shall obtain approval from the Department at least five (5) working days in advance of the discharging to the Green River for maintenance purposes.
- 2. The duration of the discharge can not exceed four (4) hours.
- 3. Beginning on the effective date of this permit and lasting through the expiration date, the Permittee is authorized to discharge municipal wastewater at the permitted location subject to complying with the limitations as specified below.

EFFLUENT LIMITATIONS: OUTFALL # 002 (Green River)			
Parameter	Daily Maximum		
Biochemical Oxygen Demand (5 day)	20 mg/L		
Total Suspended Solids	20 mg/L		
Fecal Coliform Bacteria	200/100 mL		
рН	shall not be outside the range 6.0 to 9.0		
Total Residual Chlorine	171 μg/L		

- 4. The average effluent discharge flow to the Green River must not exceed 28 cfs (cubic feet per second, equivalent to 18 MGD) and the Green River flow must be greater than 1000 cfs to ensure adequate dilution of the effluent.
- 5. All discharges to the Green River must receive secondary treatment and disinfection.
- 6. Adequate dechlorination of the effluent must be provided.
- 7. The discharge must be monitored as required in S2. to ensure that effluent limitations are met. Compliance will be based on a composite of equal volume grab samples collected prior to the point of discharge.

- 8. River water quality must be sampled at least 300 feet downstream of the diffuser at the time of the discharge for ammonia, TSS, and heavy metals as detailed in S2.
- 9. Any discharge from the treatment plant that results in water quality violations or contributes significantly to a fish kill is a violation of this permit.
- 10. Maintenance discharges will occur only during the out-going tide i.e. after a high tide and before the subsequent low tide.

C. Mixing Zone Descriptions - Marine Outfall

The maximum boundaries of the mixing zones for the **marine outfall** no. 001 are defined in WAC 173-201A-100 (7)(b) and is as follows²:

The maximum size of the mixing zone singularly or in combination with other mixing zone, shall not extend in any direction from the discharge port(s) for a distance greater than 820 feet; and also, the maximum size of the zone of acute criteria exceedance, singularly or in combination with other such zones where acute criteria may be exceeded, shall not extend beyond 82 feet as measured independently from the discharge port(s). The dilution attained within the chronic mixing zone for the critical conditions is 429:1 for the plume flowing in the direction of the current. The Dilution attained within the Zone of Acute Criteria Exceedance for the aquatic critical condition is 233:1 in the plume flowing in the direction of the current.

Marine Outfall:

Chronic Mixing Zone	820 feet
Zone of Acute Criteria Exceedance	82 feet
Chronic Dilution Ratio	429:1
Acute Dilution Ratio	233:1
Human Health Dilution Ratio	660:1

D. Mixing Zone Descriptions – Green River Outfall

The maximum boundary of the mixing zone for the **river outfall** is defined by WAC 173-201A-100 (7)(a) and is as follows³:

The mixing zone can not extend more than 310 feet downstream and more than 100 feet upstream from the diffuser. The mixing zone can not utilize greater than twenty-five percent of the flow and can not occupy greater than twenty-five percent of the width of

¹ It is assumed that discharges will only occur during very high river flows (i.e. emergency discharges) or during times when the tide is outgoing (i.e. maintenance discharges) such that the pollutants do not migrate toward the upstream edge of the mixing zone, therefore, monitoring at the upstream edge of the mixing zone is not required.

² King County Department of Natural Resources, <u>Effluent Dilution Modeling-EDRP Outfall</u>, Draft November 30, 2001. Included in the NPDES Renewal Application Package, King County, December 2001.

³ King County Department of Natural Resources, <u>Effluent Dilution Modeling-EDRP Outfall</u>, Draft November 30, 2001. Included in the NPDES Renewal Application Package, King County, December 2001.

the river. The zone where the acute criteria may be exceed shall comply with the most restrictive of the following; shall not extend beyond ten percent of the distance towards the upstream and downstream boundaries of the mixing zone and may not occupy greater than twenty-five percent of the width of the river.

Green River Outfall:

Chronic Mixing Zone	310 feet downstream 100 feet upstream of the diffuser
Zone of Acute Criteria Exceedance	31 feet downstream 10 feet upstream of the diffuser
Chronic Dilution Ratio ^a	Not Applicable
Acute Dilution Ratio ^b	9:1

^a Maintenance and emergency discharges would be of short duration and therefore would not invoke chronic Water Quality Standards.

S2. MONITORING REQUIREMENTS

A. Monitoring Schedule

The Permittee shall monitor in accordance with the following schedule:

1. South Treatment Plant Outfall #001

Parameter	Units	Sample Point	Minimum Sampling Frequency	Sample Type
Flow	MGD	Influent ²	Continuous ¹	Measurement
BOD ₅	mg/l	Influent ²	4 times per week	24-hour flow-weighted composite ³
TSS	mg/l	Influent ²	4 times per week	24-hour flow-weighted composite ³
Flow	MGD	Final Effluent	Continuous ¹	Measurement
BOD ₅	mg/l	Final Effluent ⁶	4 times per week	24-hour flow-weighted composite ³
BOD ₅	lb/day	Final Effluent	4 times per week	Calculated ⁴
BOD ₅	% removal	Final Effluent	Monthly	Calculated ⁴
TSS	mg/l	Final Effluent ⁷	4 times per week	24-hour flow-weighted composite ³
TSS	lb/day	Final Effluent	4 times per week	Calculated
TSS	% removal	Final Effluent	Monthly	Calculated ⁴

^b Calculated based on bulk dilution as described in the fact sheet p. 25.

Parameter	Units	Sample Point	Minimum Sampling	Sample Type
			Frequency	
pН	Standard Units	Final Effluent ⁷	Continuous ¹	Measurement
Chlorine	mg/l	Outfall Discharge ⁷	Continuous ¹	Measurement
Chlorine	mg/l	Outfall Discharge ⁷	Weekly (meter confirmation)	Grab ⁵
Chlorine	lb/day	Outfall Discharge	Daily	Calculated
Fecal Coliform	#/100 ml	Final Effluent ⁷	4 times per week	Grab ⁵

2. Pretreatment (reference section S6.)

Parameter	Sample Point	Minimum Sample Frequency	Sample Type
Priority Pollutants Metals	Influent	Quarterly ^{9,10}	24-hr. Comp. ³
	Final Effluent ⁷	Quarterly ^{9,10}	24-hr. Comp. ³
	Primary Effluent concurrent with effluent sampling. (Sample near the location where flow is bypassed during flow blending events)	Quarterly ^{9,10} (The purpose of this sampling event is to provide data to evaluate the impact of flow blending on the receiving water.)	24-hr. Comp. ³
40 CFR Part 503 metals for biosolids	Biosolids	Quarterly ^{9,10} One (1) taken within 30 days after influent sample.	Grab ⁵
Oil and Grease	Influent	Quarterly 10, 11	Grab ⁵
	Final Effluent ⁷	Quarterly ^{10, 11} Concurrently with influent sampling	Grab ⁵
Cyanide	Influent	influent sampling Quarterly 10	Grab ⁵
·	Final Effluent ⁷	Quarterly ¹⁰ Concurrently with influent sampling	Grab ⁵
	Biosolids	Quarterly ¹⁰ One (1) taken within 30 days after influent sample	Grab ⁵
pH	Influent	Quarterly ¹⁰	Grab ⁵
	Final Effluent ⁷	Quarterly ¹⁰ Concurrently with influent sampling	Continuous Measurement ¹
	Biosolids	Quarterly ¹⁰ One (1) taken within 30 days after influent sample.	Grab ⁵

Parameter	Sample Point	Minimum Sample Frequency	Sample Type
Priority Pollutants Organics	Influent	Semi-annually	24-hr. Comp. ³
	Final Effluent ⁷	Semi-annually, Concurrently with influent sampling	24-hr. Comp. ³
	Biosolids	Semi-annually One (1) taken within 30 days after influent sample	Grab ⁵
Total Phenols	Influent	Quarterly ¹⁰	Manual Comp.
	Final Effluent ⁷	Quarterly ¹⁰	Manual Comp.
	Biosolids	Quarterly ¹⁰ One (1) taken within 30 days after influent sample	Grab ⁵
Other toxic pollutants likely to be present	Influent	Semi-annually 10	24-hr. Comp. ³
-	Final Effluent ⁷	Semi-annually ¹⁰ Concurrently with influent sampling	24-hr. Comp. ³
	Biosolids	Semi-annually ¹⁰ One (1) taken within 30 days after influent sample	Grab ⁵

3. Whole Effluent Toxicity Testing (reference sections S8 and S9.)

Parameter	Sample Point	Minimum Sampling	Sample
		Frequency	Type
Acute Toxicity Testing	Final Effluent ¹²	4/permit cycle	24-hr Comp. ³
Chronic Toxicity Testing	Final Effluent ¹²	4/permit cycle	24-hr Comp. ³

4. Flow Blending (reference section S13.)

Parameter	Units	Sample Point	Minimum Sampling Frequency	Sample Type
Volume	MG	Secondary bypass flow, before blending (i.e. primary effluent)	once per flow blending event	Calculation from flow meter reading
Duration	Hours	Duration Secondary Treatment bypassed (i.e. primary effluent)	once per flow blending event	calculate
BOD ₅	mg/l, lb/day	Secondary bypass flow, before blending (i.e. primary effluent)	once per flow blending event	equal volume, time weighted composite during flow blending event

Parameter	Units	Sample Point	Minimum Sampling	Sample
			Frequency	Type
Soluble BOD ₅	mg/l, lb/day	Secondary bypass flow, before blending (i.e. primary effluent)	once per flow blending event	equal volume time weighted composite during flow blending event
TSS	mg/l, lb/day	Secondary bypass flow, before blending (i.e. primary effluent)	once per flow blending event	equal volume time weighted composite during flow blending event

5. Green River Discharge (reference section S1.B.)

Parameter	Units	Sample Point	Minimum Sampling Frequency	Sample Type
Volume	MG	Final Effluent at Green River Outfall	once per event	Calculation or flow meter reading
Duration	Hours	Final Effluent at Green River Outfall	once per event	Measurement
River Flow	cfs	Green River	once per event	Measurement
Tidal Stage	feet	none	once per event	Tidal chart
BOD ₅	mg/l, lb/day	Final Effluent at Green River Outfall	once per event	composite of equal volume grab samples during event
TSS	mg/l, lb/day	Final Effluent at Green River Outfall	once per event	composite of equal volume grab samples during event
Ammonia	mg/L	Final Effluent at Green River Outfall	once per event	Grab
TSS	mg/L	310 feet downstream of discharge	once per event	Grab
Ammonia	mg/L	310 feet downstream of discharge	once per event	Grab
Priority Pollutant Metals	mg/L	310 feet downstream of discharge	once per event	Grab

Footnotes for above tables:

¹ Continuous means uninterrupted except for brief lengths of time for calibration, for power failure, or for unanticipated equipment repair or maintenance. Sampling shall be taken every 2 hours when continuous monitoring is not possible.

- ² Wastewater Influent means the raw sewage flow and shall be sampled at the headworks of the treatment plant excluding any sidestream returns from inside the plant. (South Plant has some return streams from the plant included in the influent sample.)
- ³ 24-hour composite means a series of individual samples collected over a 24-hour period into a single container, and analyzed as one sample.
- ⁴ Percent (%) removal of BOD and TSS shall be calculated with the following algorithm (concentrations in mg/L): (Average Monthly Influent Concentration - Average Monthly Effluent Concentration)/Average Monthly Influent Concentration
- ⁵ "Grab" means an individual sample collected over a fifteen (15) minute, or less, period.
- ⁶ Effluent samples for BOD₅ analysis may be taken before or after the disinfection process. If taken after, the sample shall be dechlorinated and reseeded.
- 7 "Final Effluent" means wastewater which is exiting, or has exited, the last treatment process or operation. Typically, this is after or at the exit from the chlorine contact chamber or other disinfection and dechlorination processes.
- ⁸ "Calculation" means figured concurrently with the respective sample, using the following formula: Concentration (in mg/L) X Flow (in MGD) X Conversion Factor (8.34) = lbs/day.
- The method number and detector for metals are as indicated in the table below. The effluent is being monitored with ICP methodology.

Parameter	Method Number	Detector
Arsenic	200.7, 200.8	ICP/OES, ICP-MS
Beryllium	200.7, 200.8	ICP/OES, ICP-MS
Cadmium	200.7, 200.8	ICP/OES, ICP-MS
Chromium	200.7, 200.8	ICP/OES, ICP-MS
Copper	200.7, 200.8	ICP/OES, ICP-MS
Lead	200.7, 200.8	ICP/OES, ICP-MS
Mercury	245.1, 245.2	COLD VAPOR
Nickel	200.7, 200.8	ICP/OES, ICP-MS
Silver	200.7, 200.8	ICP/OES, ICP-MS
Zinc	200.7, 200.8	ICP/OES, ICP-MS
Antimony	200.7, 200.8	ICP/OES, ICP-MS
Selenium	200.7, 200.8	ICP/OES, ICP-MS
Thallium	200.7, 200.8	ICP/OES, ICP-MS

ICP-MS Inductively Coupled Plasma-Mass Spectrometry

ICP-OES Inductively Coupled Plasma-Optical Emission Spectrometry

¹⁰ The days selected for sampling shall be rotated quarterly (e.g., first quarter sample Monday, second quarter sample Tuesday, etc.). The testing must be done during a wet season and a dry season.

¹¹ Oil and Grease must be determined from a minimum of one grab sample. Total Phenols must be determined from a manual grab sample. Volatile Organic Compounds must be determined from a manual composite consisting of a minimum of four (4) grab samples collected over a 24-hour period, one every four (4) to six (6) hours and composited in the laboratory.

¹² Sample prior to chlorination.

B. Sampling and Analytical Procedures

Samples and measurements taken to meet the requirements of this permit shall be representative of the volume and nature of the monitored parameters, including representative sampling of any unusual discharge or discharge condition, including bypasses, upsets, and maintenance-related conditions affecting effluent quality.

Sampling and analytical methods used to meet the monitoring requirements specified in this permit shall conform to the latest revision of the *Guidelines Establishing Test Procedures for the Analysis of Pollutants* contained in 40 CFR Part 136 or to the latest revision of *Standard Methods for the Examination of Water and Wastewater* (APHA), unless otherwise specified in this permit or approved in writing by the Department of Ecology (Department).

C. Flow Measurement

Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the quantity of monitored flows. The devices shall be installed, calibrated, and maintained to ensure that the accuracy of the measurements is consistent with the accepted industry standard for that type of device. Frequency of calibration shall be in conformance with manufacturer's recommendations and at a minimum frequency of at least one calibration per year. Calibration records shall be maintained for at least three (3) years.

D. Laboratory Accreditation

All monitoring data required by the Department shall be prepared by a laboratory registered or accredited under the provisions of, *Accreditation of Environmental Laboratories*, Chapter 173-50 WAC. Flow, temperature, settleable solids, conductivity, pH, and internal process control parameters are exempt from this requirement. Conductivity and pH shall be accredited if the laboratory must otherwise be registered or accredited.

S3. REPORTING AND RECORDKEEPING REQUIREMENTS

The Permittee shall monitor and report in accordance with the following conditions. The falsification of information submitted to the Department shall constitute a violation of the terms and conditions of this permit.

A. Reporting

The first monitoring period begins on the effective date of the permit. Monitoring results shall be submitted monthly. Monitoring data obtained during each monitoring period shall be summarized, reported, and submitted on a Discharge Monitoring Report (DMR) form provided, or otherwise approved, by the Department. DMR forms shall be received by the Department no later than the **20**th **day of the month** following the

completed monitoring period, unless otherwise specified in this permit. Priority pollutant analysis data shall be submitted no later than sixty (60) days following the monitoring period. Unless otherwise specified, all toxicity test data shall be submitted within sixty (60) days after the sample date. The report(s) shall be sent to the Department of Ecology, Northwest Regional Office, 3190 160th Avenue SE, Bellevue, Washington 98008-5452.

All laboratory reports providing data for organic and metal parameters shall include the following information: sampling date, sample location, date of analysis, parameter name, analytical method/ number, method detection limit (MDL), record detection limit (RDL), reporting units, and concentration detected.

Discharge Monitoring Report forms must be submitted monthly whether or not the facility was discharging. If there was no discharge during a given monitoring period, submit the form as required with the words "no discharge" entered in place of the monitoring results.

B. Records Retention

The Permittee shall retain records of all monitoring information for a minimum of three (3) years. Such information shall include all calibration and maintenance records and all original recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit. This period of retention shall be extended during the course of any unresolved litigation regarding the discharge of pollutants by the Permittee or when requested by the Department.

C. Recording of Results

For each measurement or sample taken, the Permittee shall record the following information: (1) the date, exact place, method, and time of sampling or measurement; (2) the individual who performed the sampling or measurement; (3) the dates the analyses were performed; (4) the individual who performed the analyses; (5) the analytical techniques or methods used; and (6) the results of all analyses.

D. Additional Monitoring by the Permittee

If the Permittee monitors any pollutant more frequently than required by this permit using test procedures specified by Condition S2 of this permit, then the results of such monitoring shall be included in the calculation and reporting of the data submitted in the Permittee's DMR.

E. <u>Noncompliance Notification</u>

In the event the Permittee is unable to comply with any of the terms and conditions of this permit due to any cause, the Permittee shall:

- 1. Immediately take action to stop, contain, and cleanup unauthorized discharges or otherwise stop the noncompliance, correct the problem and, if applicable, repeat sampling and analysis of any noncompliance immediately and submit the results to the Department within thirty (30) days after becoming aware of the violation.
- 2. In accordance with federal regulations 40 CFR 122.31 (l)(6)(i), "the permittee shall report noncompliance which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances."
- 3. Submit a detailed, written report to the Department within thirty (30) days (as soon as possible but no later than five [5] business days for upsets and bypasses), unless requested earlier by the Department. The report shall contain a description of the noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

Compliance with these requirements does not relieve the Permittee from responsibility to maintain continuous compliance with the terms and conditions of this permit or the resulting liability for failure to comply.

F. Maintaining a Copy of This Permit

A copy of this permit must be kept at the treatment plant and be made available upon request to the public or Ecology inspectors.

G. Reporting - Shellfish Protection

Unauthorized discharges such as collection system overflows, plant bypasses, or failure of the disinfection system of significant public health concern, shall be reported <u>immediately</u> to the Department of Ecology and the Department of Health, Shellfish Program. The Department of Ecology's Northwest Regional Office 24-hr. number is 425-649-7000, and the Department of Health's Shellfish 24-hr. number is 360-236-3330.

S4. FACILITY LOADING

A. Design Criteria

Flows or waste loadings of the following design criteria for the permitted treatment facility shall not be exceeded⁴:

Average flow for the maximum month: 144 MGD BOD₅ loading for maximum month: 251,000 lb/day TSS loading for maximum month: 235,000 lb/day

⁴ Brown and Caldwell, <u>East Division Reclamation Plant Liquid Stream Improvements III2B.1</u>, Drawing No. G3003, November 1996.

B. Plans for Maintaining Adequate Capacity

The Permittee shall submit to the Department a plan and a schedule for continuing to maintain capacity when:

- 1. The actual flow or waste load reaches 85 percent of any one of the design criteria in S4.A for three (3) consecutive months; or
- 2. When the projected increase would reach design capacity within five (5) years,

whichever occurs first. If such a plan is required, it shall contain a plan and schedule for continuing to maintain capacity. The capacity as outlined in this plan must be sufficient to achieve the effluent limitations and other conditions of this permit. This plan shall address any of the following actions or any others necessary to meet the objective of maintaining capacity.

- 1. Analysis of the present design including the introduction of any process modifications that would establish the ability of the existing facility to achieve the effluent limits and other requirements of this permit at specific levels in excess of the existing design criteria specified in paragraph A above.
- 2. Reduction or elimination of excessive infiltration and inflow of uncontaminated ground and surface water into the sewer system.
- 3. Limitation on future sewer extensions or connections or additional waste loads.
- Modification or expansion of facilities necessary to accommodate increased flow or waste load.
- 5. Reduction of industrial or commercial flows or waste loads to allow for increasing sanitary flow or waste load.

Engineering documents associated with the plan must meet the requirements of WAC 173-240-060, "Engineering Report," and be approved by the Department prior to any construction. The plan shall specify any contracts, ordinances, methods for financing, or other arrangements necessary to achieve this objective.

C. Duty to Mitigate

The Permittee is required to take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit that has a reasonable likelihood of adversely affecting human health or the environment

D. Notification of New or Altered Sources

The Permittee shall submit written notice to the Department whenever any new discharge or a substantial change in volume or character of an existing discharge into the POTW is proposed which: (1) would interfere with the operation of, or exceed the design capacity of, any portion of the POTW; (2) is not part of an approved general

sewer plan or approved plans and specifications; or (3) would be subject to pretreatment standards under 40 CFR Part 403 and Section 307(b) of the Clean Water Act. This notice shall include an evaluation of the POTW's ability to adequately transport and treat the added flow and/or waste load, the quality and volume of effluent to be discharged to the POTW, and the anticipated impact on the Permittee's effluent [40 CFR 122.42(b)].

Written notice to the Department will be in the form of the draft and final permit submittals and will also be included in the annual Pretreatment Report sent to the Department's NWRO Pretreatment Coordinator.

E. <u>Infiltration and Inflow Progress Report</u>

- 1. The Permittee shall submit a biennial infiltration and inflow (I/I) progress report. The report must be submitted according to the dates as shown on the Summary of Permit Report Submittals.
- 2. A report shall be prepared which summarizes progress made toward measuring the infiltration and inflow and the progress that has been made toward removing infiltration and inflow from the system since the previous I/I Progress Report.
- 3. The first report shall be submitted by October 1, 2005, and every two (2) years thereafter.

F. Waste Load Assessment

The Permittee shall conduct an annual assessment of their flow and waste load and submit a report to the Department by October 1, 2005 (for the year beginning July 1, 2004 and finishing on June 30, 2005), and annually thereafter. The report shall contain the following: an indication of compliance or noncompliance with the permit effluent limitations; a comparison between the existing and design monthly average dry weather and wet weather flows, peak flows, BOD, and total suspended solids loadings; and the percentage increase in these parameters since the last report. The report shall also state the present and design population or population equivalent, projected population growth rate, and the estimated date upon which the design capacity is projected to be reached, according to the most restrictive of the parameters above. The interval for review and reporting may be modified if the Department determines that a different frequency is sufficient.

S5. OPERATION AND MAINTENANCE

The Permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed to achieve compliance with the terms and conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems, which are installed by a Permittee only when the operation is necessary to achieve compliance with the conditions of this permit.

A. Certified Operator

An operator certified for a Class IV plant by the state of Washington shall be in responsible charge of the day-to-day operation of the wastewater treatment plant. An operator certified for at least a Class III plant shall be in charge during all regularly scheduled shifts.

B. O & M Program

The Permittee shall institute an adequate operation and maintenance program for the entire sewage system. Maintenance records shall be maintained on all major electrical and mechanical components of the treatment plant, as well as the sewage system and pumping stations. Such records shall clearly specify the frequency and type of maintenance recommended by the manufacturer and shall show the frequency and type of maintenance performed. These maintenance records shall be available for inspection at all times.

C. Short-term Reduction

If a Permittee contemplates a reduction in the level of treatment that would cause a violation of permit discharge limitations on a short-term basis for any reason, and such reduction cannot be avoided, the Permittee shall give written notification to the Department, if possible, thirty (30) days prior to such activities, detailing the reasons for, length of time of, and the potential effects of the reduced level of treatment. This notification does not relieve the Permittee of its obligations under this permit.

D. Electrical Power Failure

The Permittee is responsible for maintaining adequate safeguards to prevent the discharge of untreated wastes or wastes not treated in accordance with the requirements of this permit during electrical power failure at the treatment plant and/or sewage lift stations either by means of alternate power sources, standby generator, or retention of inadequately treated wastes.

The Permittee shall maintain Reliability Class II (EPA 430-99-74-001) at the wastewater treatment plant, which requires a backup power source sufficient to operate all vital components and critical lighting and ventilation during peak wastewater flow conditions, except vital components used to support the secondary processes (i.e., mechanical aerators or aeration basin air compressors) need not be operable to full levels of treatment, but shall be sufficient to maintain the biota.

E. Prevent Connection of Inflow

The Permittee shall strictly enforce their sewer ordinances and not allow the connection of inflow (roof drains, foundation drains, etc.) to the sanitary sewer system.

F. Bypass Procedures

Bypass, which is the intentional diversion of waste streams from any portion of a treatment facility, is prohibited, and the Department may take enforcement action against a Permittee for bypass unless one of the following circumstances (1, 2, or 3) is applicable. Exceptions to this bypass prohibition are specifically authorized in Condition S13. (Flow Blending).

1. Bypass for essential maintenance without the potential to cause violation of permit limits or conditions.

Bypass is authorized if it is for essential maintenance and does not have the potential to cause violations of limitations or other conditions of this permit, or adversely impact public health as determined by the Department prior to the bypass. The Permittee shall submit prior notice, if possible, at least ten (10) days before the date of the bypass.

2. Bypass which is unavoidable, unanticipated, and results in noncompliance of this permit.

This bypass is permitted only if:

- a. Bypass is unavoidable to prevent loss of life, personal injury, or severe property damage. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which would cause them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass.
- b. There are no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, stopping production, maintenance during normal periods of equipment downtime (but not if adequate backup equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventative maintenance), or transport of untreated wastes to another treatment facility.
- c. The Department is properly notified of the bypass as required in Condition S3E of this permit.
- 3. Bypass which is anticipated and has the potential to result in noncompliance of this permit

The Permittee shall notify the Department at least thirty (30) days before the planned date of bypass. The notice shall contain: (1) a description of the bypass and its cause; (2) an analysis of all known alternatives which would eliminate, reduce, or mitigate the need for bypassing; (3) a cost-effectiveness analysis of alternatives including comparative resource damage assessment; (4) the minimum

and maximum duration of bypass under each alternative; (5) a recommendation as to the preferred alternative for conducting the bypass; (6) the projected date of bypass initiation; (7) a statement of compliance with SEPA; (8) a request for modification of water quality standards as provided for in WAC 173-201A-110, if an exceedance of any water quality standard is anticipated; and (9) steps taken or planned to reduce, eliminate, and prevent reoccurrence of the bypass.

For probable construction bypasses, the need to bypass is to be identified as early in the planning process as possible. The analysis required above shall be considered during preparation of the engineering report or facilities plan and plans and specifications and shall be included to the extent practical. In cases where the probable need to bypass is determined early, continued analysis is necessary up to and including the construction period in an effort to minimize or eliminate the bypass.

The Department will consider the following prior to issuing an administrative order for this type bypass:

- a. If the bypass is necessary to perform construction or maintenance-related activities essential to meet the requirements of this permit.
- b. If there are feasible alternatives to bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, stopping production, maintenance during normal periods of equipment down time, or transport of untreated wastes to another treatment facility.
- c. If the bypass is planned and scheduled to minimize adverse effects on the public and the environment

After consideration of the above and the adverse effects of the proposed bypass and any other relevant factors, the Department will approve or deny the request. The public shall be notified and given an opportunity to comment on bypass incidents of significant duration, to the extent feasible. Approval of a request to bypass will be by administrative order issued by the Department under RCW 90.48.120.

G. Operations and Maintenance Manual

The Operations and Maintenance Manuals shall be kept available at the treatment plant and all operators shall follow the instructions and procedures of the manuals.

The Operation and Maintenance Manuals shall be reviewed at least annually and updated as needed. A letter shall be sent to the Department annually confirming that the review and necessary updates were completed.

S6. PRETREATMENT

A. General Requirements

- 1. The Permittee shall implement the Industrial Pretreatment Program in accordance with the legal authorities, policies, procedures, and financial provisions described in the Permittee's approved pretreatment program submittal entitled "Industrial Pretreatment Program" and dated April 27, 1981; any approved revisions thereto; and the General Pretreatment Regulations (40 CFR Part 403). At a minimum, the following pretreatment implementation activities shall be undertaken by the Permittee:
 - a. Enforce categorical pretreatment standards promulgated pursuant to Section 307(b) and (c) of the Federal Clean Water Act (hereinafter, the Act), prohibited discharge standards as set forth in 40 CFR 403.5, local limitations specified in Section (a) of King County Ordinance No. 11034 (as amended by King County Ordinance No. 11963 on January 1, 1996, previously known as METRO Resolution 3374), or state standards, which ever are most stringent or apply at the time of issuance or modification of a local industrial waste discharge permit. Locally derived limitations shall be defined as pretreatment standards under Section 307(d) of the Act and shall not be limited to categorical industrial facilities.
 - b. Issue industrial waste discharge permits to all significant industrial users [SIUs, as defined in 40 CFR 403.3(t)(i)(ii)] contributing to the treatment system, including those from other jurisdictions. Industrial waste discharge permits shall contain as a minimum, all the requirements of 40 CFR 403.8 (f)(l)(iii). The Permittee shall coordinate the permitting process with the Department regarding any industrial facility, which may possess a state waste discharge permit issued by the Department. Once issued, an industrial waste discharge permit will take precedence over a state-issued waste discharge permit.
 - c. Maintain and update, as necessary, records identifying the nature, character, and volume of pollutants contributed by industrial users to the POTW. Records shall be maintained for at least a three-year period.
 - d. Perform inspections, surveillance, and monitoring activities on industrial users to determine and/or confirm compliance with applicable pretreatment standards and requirements. A thorough inspection of SIUs shall be conducted annually. Frequency of regular local monitoring of SIU wastewaters shall normally be commensurate with the character and volume of the wastewater but shall not be less than once per year. Sample collection and analysis shall be performed in accordance with 40 CFR Part 403.12(b)(5)(ii)-(v) and 40 CFR Part 136.

- e. Enforce and obtain remedies for noncompliance by any industrial users with applicable pretreatment standards and requirements. Once violations have been identified, the Permittee shall take timely and appropriate enforcement action to address the noncompliance. The Permittee's action shall follow its enforcement response procedures and any amendments, thereof.
- f. Publish, at least annually in the largest daily newspaper in the Permittee's service area, a list of all nondomestic users which, at any time in the previous 12 months, were in significant noncompliance as defined in 40 CFR 403.8(f)(2)(vii).
- g. If the Permittee elects to conduct sampling of a SIU's discharge in lieu of the user self-monitoring, it shall sample and analyze for all regulated pollutants in accordance with 40 CFR Part 403.12(b)(5)(ii)-(v), 40 CFR 403.12(g), and 40 CFR Part 136. The character and volume of the samples shall be representative of the discharge and shall provide adequate data to determine compliance, but in no case should sampling occur less than two (2) times per year.
- h. Develop and maintain a data management system designed to track the status of the Permittee's industrial user inventory, industrial user discharge characteristics, and compliance status.
- i. Maintain adequate staff, funds, and equipment to implement its pretreatment program.
- j. Establish, where necessary, contracts or legally binding agreements with contributing jurisdictions to ensure compliance with applicable pretreatment requirements by commercial or industrial users within these jurisdictions. These contracts or agreements shall identify the agency responsible for the various implementation and enforcement activities to be performed in the contributing jurisdiction.
- 2. The Permittee shall implement the Accidental Spill Prevention Program described in the approved Industrial Pretreatment Program dated April 27, 1981.
- 3. The Permittee shall evaluate, at least once every two years, whether each Significant Industrial User needs a plan to control slug discharges. For purposes of this subsection, a slug discharge is any discharge of a nonroutine, episodic nature, including but not limited to an accidental spill or noncustomary batch discharge. The results of such activities shall be available to the Department upon request. If the Permittee decides that a slug control plan is needed, the plan shall contain, at a minimum, the following elements:
 - a. Description of discharge practices, including nonroutine batch discharges.
 - b. Description of stored chemicals.

- c. Procedures for immediately notifying the Permittee of slug discharges, including any discharge that would violate a prohibition under 40 CFR 403.5(b), with procedures for follow-up written notification within five days.
- d. If necessary, procedures to prevent adverse impact from accidental spills, including inspection and maintenance of storage areas, handling and transfer of materials, loading and unloading operations, control of plant site run-off, worker training, building of containment structures or equipment, measures for containing toxic organic pollutants (including solvents), and/or measures and equipment necessary for emergency response.
- 4. Whenever it has been determined, on the basis of information provided to or obtained by the Department, that any waste source contributes pollutants to the Permittee's treatment works in violation of Subsection (b), (c), or (d) of Section 307 of the Act, and the Permittee has not taken adequate corrective action, the Department shall notify the Permittee of this determination. Failure by the Permittee to commence an appropriate enforcement action within thirty (30) days of this notification may result in appropriate enforcement action by the Department against the source and/or the Permittee.

5. Pretreatment Report

The Permittee shall provide to the Department an annual report that briefly describes its program activities during the previous calendar year. This report shall be submitted no later than March 31st of each year to:

Department of Ecology Northwest Regional Office 3190 -160th Avenue SE Bellevue, WA 98008-5452

The report shall include the following information:

- a. An updated nondomestic inventory.
- b. Results of wastewater sampling at the treatment plant as specified in S6.B. The Permittee shall calculate removal rates for each pollutant and evaluate the adequacy of the existing local limitations in Section (a) of Ordinance 11034 in prevention of treatment plant interference, pass through of pollutants that could affect receiving water quality, and biosolids contamination.
- c. Status of program implementation, including:
 - (1) Any substantial modifications to the pretreatment program as originally approved by the Department, including staffing and funding levels.
 - (2) Any interference, upset, or permit violations experienced at the POTW that are directly attributable to wastes from industrial users.

- (3) Listing of industrial users inspected and/or monitored, and a summary of the results.
- (4) Listing of industrial users scheduled for inspection and/or monitoring for the next year, and expected frequencies.
- (5) Listing of industrial users notified of promulgated pretreatment standards and/or local standards as required in 40 CFR 403.8(f)(2)(iii). Indicate which industrial users are on compliance schedules and the final date of compliance for each.
- (6) Listing of industrial users issued industrial waste discharge permits.
- (7) Planned changes in the pretreatment program implementation plan. (See subsection A.6. below.)
- d. Status of compliance activities, including:
 - (1) Listing of industrial users that failed to submit baseline monitoring reports or any other reports required under 40 CFR 403.12 and in the Permittee's pretreatment program, dated April 28, 1981.
 - (2) Listing of industrial users that were at any time during the reporting period not complying with federal, state, or local pretreatment standards or with applicable compliance schedules for achieving those standards, and the duration of such noncompliance.
 - (3) Summary of enforcement activities and other corrective actions taken or planned against noncomplying industrial users. The Permittee shall supply to the Department a copy of the public notice of facilities that were in significant noncompliance.
- 6. The Permittee shall request and obtain approval from the Department prior to implementing any significant changes to the local pretreatment program as approved. The procedure of 40 CFR 403.18 (b) & (c) shall be followed.

B. Monitoring Requirements

The Permittee shall monitor its influent, effluent, and biosolids for the priority pollutants identified in Tables II and III of Appendix D of 40 CFR Part 122 as amended, any compounds identified as a result of Condition S6.B.4, and any other pollutants expected from nondomestic sources using U.S. EPA-approved procedures for collection, preservation, storage, and analysis. Influent, effluent, and biosolids samples shall be tested for the priority pollutant metals (Table III, 40 CFR 122, Appendix D) on a quarterly basis throughout the term of this permit. Influent, effluent, and biosolids samples shall be tested for the organic priority pollutants (Table II, 40 CFR 122, Appendix D) on an annual basis.

1. The POTW influent and effluent shall be sampled on a day when industrial discharges are occurring at normal to maximum levels. Samples for the analysis of acid and base/neutral extractable compounds and metals shall be 24-hour composites. Samples for the analysis of volatile organic compounds shall be collected using grab sampling techniques at equal intervals for the total of four grab samples per day.

A single analysis for volatile pollutants (Method 624) may be run for each monitoring day by compositing equal volumes of each grab sample directly in the GC purge and trap apparatus in the laboratory, with no less than 1 ml of each grab included in the composite.

Unless otherwise indicated, all reported test data for metals shall represent the total amount of the constituent present in all phases, whether solid, suspended, or dissolved, elemental or combined including all oxidation states.

2. A biosolids sample shall be collected within thirty (30) days after the influent sample is collected (Permit Section S2.A.1). Sampling and analysis shall conform to U.S. EPA Methods 624 and 625 unless the Permittee requests an alternate method and it has been approved by the Department.

The Department approves alternate U.S. EPA methods 8260 and 8270 to be used with a solid matrix such as biosolids.

- 3. Phenols and oils shall be taken as grab samples per footnote 11 to the table in S2.A. Oils shall be hexane soluble or equivalent, and should be measured in the influent and effluent only.
- In addition to quantifying pH, oil and grease, and all priority pollutants, a reasonable attempt should be made to identify all other substances and quantify all pollutants shown to be present by gas chromatograph/mass spectrometer (GC/MS) analysis per 40 CFR 136, Appendix A, Methods 624 and 625. Determinations of pollutants should be attempted for each fraction, which produces identifiable spectra on total ion plots (reconstructed gas chromatograms). Determinations should be attempted from all peaks with responses 5% or greater than the nearest internal standard. The 5% value is based on internal standard concentrations of 30 µg/l, and must be adjusted downward if higher internal standard concentrations are used or adjusted upward if lower internal standard concentrations are used. Nonsubstituted aliphatic compounds may be expressed as total hydrocarbon content. Identification shall be attempted by a laboratory whose computer data processing programs are capable of comparing sample mass spectra to a computerized library of mass spectra, with visual confirmation by an experienced analyst. For all detected substances which are determined to be pollutants. additional sampling and appropriate testing shall be conducted to determine concentration and variability, and to evaluate trends.

C. Reporting of Monitoring Results

The Permittee shall include an annual summary of monitoring results in the Annual Pretreatment Report as specified in S6.A.5.

In addition, the Permittee shall submit an Effluent Analysis Summary with the application for permit renewal. This summary should be a compilation of the effluent analysis data collected during the term of the permit and be provided to the Department in an electronic format such as a Microsoft Excel[®] spreadsheet format.

D. Local Limit Development

As sufficient data becomes available, the Permittee shall, in consultation with the Department, reevaluate their local limits in order to prevent pass through or interference. Upon determination by the Department that any pollutant present causes pass through or interference, or exceeds established biosolids standards, the Permittee shall establish new local limits or revise existing local limits as required by 40 CFR 403.5. In addition, the Department may require revision or establishment of local limits for any pollutant discharged from the POTW that has a reasonable potential to exceed the water quality standards, sediment standards, or established effluent limits, or causes whole effluent toxicity. The determination by the Department shall be in the form of an Administrative Order.

The Department may modify this permit to incorporate additional requirements relating to the establishment and enforcement of local limits for pollutants of concern. Any permit modification is subject to formal due process procedures pursuant to state and federal law and regulation.

S7. RESIDUAL SOLIDS

Residual solids include screenings, grit, scum, primary sludge, waste activated sludge, and other solid waste. The Permittee shall store and handle all residual solids in such a manner so as to prevent their entry into state ground or surface waters. The Permittee shall not discharge leachate from residual solids to state surface or ground waters.

S8. ACUTE TOXICITY

A. Testing Requirements

The Permittee shall test final effluent once per quarter in the year prior to submission of the application for permit renewal and in accordance with the submittal dates as listed on the Summary of Permit Report Submittals. The two copies of the Toxicity Characterization Data shall be provided to the Department for review and analysis in accordance with submittal dates as listed on the Summary of Permit Report Submittals. In addition, the Toxicity Test Characterization Summary Report must be provided upon application for permit renewal.

The two species listed below shall be used on each sample. The Permittee shall conduct acute toxicity testing on a series of five concentrations of effluent and a control in order to be able to determine appropriate point estimates and an NOEC (no observed effect concentration). The percent survival in 100% effluent shall also be reported.

Acute toxicity tests shall be conducted with the following species and protocols:

- 1. Fathead minnow, *Pimephales promelas* (96-hour static-renewal test, method: EPA/800/R/02/012)
- 2. Daphnid, *Ceriodaphnia dubia*, *Daphnia pulex*, or *Daphnia magna* (48-hour static test, method: EPA/800/R/02/012).

B. Sampling and Reporting Requirements

- 1. All reports for effluent characterization or compliance monitoring shall be submitted in accordance with the most recent version of Department of Ecology Publication # WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria*, in regards to format and content. Reports shall contain bench sheets and reference toxicant results for test methods. If the lab provides the toxicity test data on floppy disk for electronic entry into the Department's database, then the Permittee shall send the disk to the Department along with the test report, bench sheets, and reference toxicant results.
- 2. Testing shall be conducted on 24-hour composite effluent samples. Samples taken for toxicity testing shall be cooled while being collected and while being delivered to the testing facility in order to meet the sample requirements of #WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria*. The lab shall begin toxicity testing as soon as possible but no later than 36 hours after sampling was ended.
- 3. All samples and test solutions for toxicity testing shall have water quality measurements as specified in Department of Ecology Publication # WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria*, or most recent version thereof.
- 4. All toxicity tests shall meet quality assurance criteria and test conditions in the most recent versions of the EPA manual listed in Subsection A and the Department of Ecology Publication # WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria*. If test results are determined to be invalid or anomalous by the Department, testing shall be repeated with freshly collected effluent.
- 5. Control water and dilution water shall be laboratory water meeting the requirements of the EPA manual listed in Subsection A or pristine natural water of sufficient quality for good control performance.

- 6. Effluent samples for whole effluent toxicity testing shall be collected just prior to the chlorination step in the treatment process.
- 7. The Permittee may choose to conduct a full dilution series test during compliance monitoring in order to determine dose response. In this case, the series must have a minimum of five (5) effluent concentrations and a control. The series of concentrations must include the acute critical effluent concentration (ACEC). The ACEC equals 0.43% effluent.
- 8. All whole effluent toxicity tests, effluent screening tests, and rapid screening tests that involve hypothesis testing and do not comply with the acute statistical power standard of 29% as defined in WAC 173-205-020 must be repeated on a fresh sample with an increased number of replicates to increase the power.

S9. CHRONIC TOXICITY

A. <u>Testing Requirements</u>

The Permittee shall test final effluent once per quarter in the year prior to submission of the application for permit renewal and in accordance with the submittal dates as listed on the Summary of Permit Report Submittals. All of the chronic toxicity tests listed below shall be conducted on each sample. The results of this chronic toxicity testing shall be submitted to the Department as a part of the permit renewal application process.

The Permittee shall conduct chronic toxicity testing on a series of at least five (5) concentrations of effluent and a control in order to be able to determine appropriate point estimates and an NOEC. This series of dilutions shall include the ACEC. The Permittee shall compare the ACEC to the control using hypothesis testing at the 0.05 level of significance as described in Appendix H, EPA/600/4-89/001.

Chronic toxicity tests shall be conducted with the following species and the most recent version of the following protocols:

Saltwater Chronic Toxicity Test Species		Method
Topsmelt or Silverside minnow	Atherinops affinis or Menidia beryllina	EPA/600/R-95/136 or EPA/821/R/02/014
Mysid shrimp	Holmesimysis costata or Mysidopsis bahia	EPA/600/R-95/136 or EPA/821/R/02/014

The Permittee shall use the West Coast fish (topsmelt, *Atherinops affinis*) and mysid (*Holmesimysis costata*) for toxicity testing unless the lab cannot obtain a sufficient quantity of a West Coast species in good condition in which case the East Coast fish (silverside minnow, *Menidia beryllina*) or mysid (*Mysidopsis bahia*) may be substituted.

B. <u>Sampling and Reporting Requirements</u>

- 1. All reports for effluent characterization or compliance monitoring shall be submitted in accordance with the most recent version of Department of Ecology Publication # WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria*, in regards to format and content. Reports shall contain bench sheets and reference toxicant results for test methods. If the lab provides the toxicity test data on floppy disk for electronic entry into the Department's database, then the Permittee shall send the disk to the Department along with the test report, bench sheets, and reference toxicant results.
- 2. Testing shall be conducted on 24-hour composite effluent samples. Samples taken for toxicity testing shall be cooled while being collected and while being delivered to the testing facility in order to meet the sample requirements of #WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria*. The lab shall begin toxicity testing as soon as possible but no later than 36 hours after sampling was ended.
- 3. All samples and test solutions for toxicity testing shall have water quality measurements as specified in Department of Ecology Publication # WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria*, or most recent version thereof.
- 4. All toxicity tests shall meet quality assurance criteria and test conditions in the most recent versions of the EPA manual listed in Subsection A and the Department of Ecology Publication # WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria*. If test results are determined to be invalid or anomalous by the Department, testing shall be repeated with freshly collected effluent.
- 5. Control water and dilution water shall be laboratory water meeting the requirements of the EPA manual listed in Subsection A or pristine natural water of sufficient quality for good control performance.
- 6. Effluent samples for whole effluent toxicity testing shall be collected just prior to the chlorination step in the treatment process.
- 7. The Permittee may choose to conduct a full dilution series test in order to determine dose response. In this case, the series must have a minimum of five (5) effluent concentrations and a control. The series of concentrations must include the ACEC and the CCEC. The ACEC and the chronic critical effluent concentration (CCEC) may either substitute for the effluent concentration that is closest to it in the dilution series or be an extra effluent concentration. **The CCEC equals 0.23% effluent.**

8. All whole effluent toxicity tests that involve hypothesis testing and do not comply with the chronic statistical power standard of 39% as defined in WAC 173-205-020 must be repeated on a fresh sample with an increased number of replicates to increase the power.

S10. ADDITIONAL TESTING OF EFFLUENT

The Permittee shall conduct chemical analyses of effluent samples collected from the wastewater treatment system in accordance with protocols, monitoring requirements, and QA/QC procedures specified in this section. The following analyses are required in the application for permit renewal, EPA form 2A.

A. Additional Chemical Analysis

The following parameters shall be tested on the Permittee's final effluent:

Ammonia (as N)
Dissolved Oxygen
Total Kjeldahl Nitrogen (TKN)
Nitrate + Nitrite Nitrogen
Oil & Grease
Total Phosphorus
Total Dissolved Solids (TDS)

B. Protocols

Sample analysis shall be conducted in accordance with 40 CFR Part 136. It is appropriate for 24-hour composite sampling to be performed for Ammonia, TKN, Total Phosphorus, and TDS determinations. It is appropriate for grab sampling to be performed on Dissolved Oxygen, Nitrite-Nitrate, and Oil & Grease determinations. The Oil & Grease determinations performed to comply with the monitoring requirements to develop, implement, and enforce the Pretreatment Program (Permit Condition S2.A.1.) may be used to complete the Oil & Grease line item requirement within Part B.6 of Form 2A NPDES (with the next permit application) as long as the data is no more than four and one-half years old.

C. Quality Assurance/Quality Control Procedures

The Permittee shall follow the quality assurance procedures of 40 CFR Part 136 and other appropriate QA/QC requirements for standard methods for analytes not addressed by 40 CFR Part 136. At a minimum, effluent testing data must be based on at least three pollutant scans and must be no more than four and one-half years old (see instructions to Part B.6 of Form 2A NPDES).

S11. OUTFALL EVALUATION

The Permittee shall inspect once during the life of this permit, the submerged portion of the outfall line and diffuser to document its integrity and continued function. The inspection report shall be submitted to the Department in conjunction with the permit application. If conditions allow for a photographic verification, it shall be included in the report.

S12. FLOW BLENDING

Flow blending is permitted as the result of a precipitation event that causes high influent flows to the treatment plant. According to the Ecology approved Facility Plan, the maximum month secondary flow capacity is 144 MGD⁵. The plant is permitted to bypass around secondary treatment the incremental flow greater than 144 MGD and up to 325 MGD that occurs as a result of a precipitation event. Bypasses that occur when the flow at the time of the bypass is under the specified flow rate are not authorized under this condition and are subject to the bypass provisions as stated in S5.F. of the permit. All such bypassed flows shall be blended back into the fully treated flows and discharged to the Puget Sound via Outfall #001.

In the event of flow blending as authorized under this condition, the Permitee shall minimize the discharge of pollutants to the environment. At a minimum, the flow which bypasses secondary treatment must receive primary clarification, solids and floatables removal, and disinfection. The final discharge must at all times meet effluent limitations of this permit as listed in S1. Monitoring of the flow bypassing secondary treatment during each flow blending event must be completed according to the monitoring requirements listed in S2.

The Permittee shall maintain records of all flow blending events at the treatment plant. These records shall document for each event the dates during the month in which flow blending occurred and all the monitoring data collected as required by S2. All occurrences of flow blending must be reported. The report must include the above information and shall be included as a separate submittal with the monthly discharge monitoring report (DMR) during which the flow blending event occurred. A summary of all flow blending events that occurred during the term of the permit must be submitted with the application of permit renewal.

⁵ Brown and Caldwell, Metro's Regional Treatment Plant in Renton, Enlargement III Program, Final Facility Plan Including Addenda Nos. 1 and 2, February 1993.

S13. USE OF EFFLUENT RETURNED FOR DISCHARGE THROUGH THE EFFLUENT TRANSFER SYSTEM

Condition S14. authorizes the Permittee to distribute effluent from the ETS for use and return to the ETS for discharge via Outfall #001 of this permit - without modification of this permit - under the following conditions:

- 1. The distributed ETS effluent meets all treatment and disinfection requirements of Condition S1. of this permit.
- 2. The effluent is used at the Boeing facility in the approved, closed loop, noncontact Chiller project.
- 3. The Permittee requests and receives specific written approval from both the Departments of Ecology and Health for use in any similar closed loop, noncontact systems.
- 4. The effluent returned to the ETS system for discharge via Outfall #001 meets all permit requirements for that discharge.
- 5. The Permittee obtains, files and enforces a signed User contract assuring compliance with all requirements of the approved project. All new contracts must be approved by the Departments of Ecology and Health and signed by all parties prior to any distribution of the effluent.
- 6. The Permittee immediately notifies all Users during instances of noncompliance.

No other uses of ETS effluent are authorized under this permit.

GENERAL CONDITIONS

G1. SIGNATORY REQUIREMENTS

All applications, reports, or information submitted to the Department shall be signed and certified.

- A. All permit applications shall be signed by either a principal executive officer or a ranking elected official.
- B. All reports required by this permit and other information requested by the Department shall be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:
 - 1. The authorization is made in writing by a person described above and submitted to the Department.
 - 2. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility, such as the position of plant manager, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.)
- C. Changes to authorization. If an authorization under paragraph B.2 above is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of paragraph B.2 above must be submitted to the Department prior to or together with any reports, information, or applications to be signed by an authorized representative.
- D. Certification. Any person signing a document under this section shall make the following certification:

"I certify under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

G2. RIGHT OF INSPECTION AND ENTRY

The Permittee shall allow an authorized representative of the Department, upon the presentation of credentials and such other documents as may be required by law:

- A. To enter upon the premises where a discharge is located or where any records must be kept under the terms and conditions of this permit.
- B. To have access to and copy at reasonable times and at reasonable cost any records required to be kept under the terms and conditions of this permit.
- C. To inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, methods, or operations regulated or required under this permit.
- D. To sample or monitor at reasonable times any substances or parameters at any location for purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act

G3. PERMIT ACTIONS

This permit may be modified, revoked and reissued, or terminated either at the request of any interested person (including the Permittee) or upon the Department's initiative. However, the permit may only be modified, revoked and reissued, or terminated for the reasons specified in 40 CFR 122.62, 122.64 or WAC 173-220-150 according to the procedures of 40 CFR 124.5.

- A. The following are causes for terminating this permit during its term, or for denying a permit renewal application:
 - 1. Violation of any permit term or condition.
 - 2. Obtaining a permit by misrepresentation or failure to disclose all relevant facts.
 - 3. A material change in quantity or type of waste disposal.
 - 4. A determination that the permitted activity endangers human health or the environment, or contributes to water quality standards violations and can only be regulated to acceptable levels by permit modification or termination [40 CFR part 122.64(3)].
 - 5. A change in any condition that requires either a temporary or permanent reduction, or elimination of any discharge or sludge use or disposal practice controlled by the permit [40 CFR part 122.64(4)].
 - 6. Nonpayment of fees assessed pursuant to RCW 90.48.465.
 - 7. Failure or refusal of the Permittee to allow entry as required in RCW 90.48.090.

- B. The following are causes for modification but not revocation and reissuance except when the Permittee requests or agrees:
 - 1. A material change in the condition of the waters of the state.
 - 2. New information not available at the time of permit issuance that would have justified the application of different permit conditions.
 - 3. Material and substantial alterations or additions to the permitted facility or activities which occurred after this permit issuance.
 - 4. Promulgation of new or amended standards or regulations having a direct bearing upon permit conditions, or requiring permit revision.
 - 5. The Permittee has requested a modification based on other rationale meeting the criteria of 40 CFR part 122.62.
 - 6. The Department has determined that good cause exists for modification of a compliance schedule, and the modification will not violate statutory deadlines.
 - 7. Incorporation of an approved local pretreatment program into a municipality's permit.
- C. The following are causes for modification or alternatively revocation and reissuance:
 - 1. Cause exists for termination for reasons listed in A1 through A7 of this section, and the Department determines that modification or revocation and reissuance is appropriate.
 - 2. The Department has received notification of a proposed transfer of the permit. A permit may also be modified to reflect a transfer after the effective date of an automatic transfer (General Condition G8) but will not be revoked and reissued after the effective date of the transfer except upon the request of the new permittee.

G4. REPORTING PLANNED CHANGES

The Permittee shall, as soon as possible, but no later than sixty (60) days prior to the proposed changes, give notice to the Department of planned physical alterations or additions to the permitted facility, production increases, or process modification which will result in:

- 1) the permitted facility being determined to be a new source pursuant to 40 CFR 122.29(b);
- 2) a significant change in the nature or an increase in quantity of pollutants discharged; or
- 3) a significant change in the Permittee's sludge use or disposal practices. Following such notice, and the submittal of a new application or supplement to the existing application, along with required engineering plans and reports, this permit may be modified, or revoked and reissued pursuant to 40 CFR 122.62(a) to specify and limit any pollutants not previously limited. Until such modification is effective, any new or increased discharge in excess of permit limits or not specifically authorized by this permit constitutes a violation of the terms and conditions of this permit.

G5. PLAN REVIEW REQUIRED

Prior to constructing or modifying any wastewater control facilities, an engineering report and detailed plans and specifications shall be submitted to the Department for approval in accordance with Chapter 173-240 WAC. Engineering reports, plans, and specifications shall be submitted at least one hundred and eighty (180) days prior to the planned start of construction unless a shorter time is approved by Ecology. Facilities shall be constructed and operated in accordance with the approved plans.

G6. COMPLIANCE WITH OTHER LAWS AND STATUTES

Nothing in this permit shall be construed as excusing the Permittee from compliance with any applicable federal, state, or local statutes, ordinances, or regulations.

G7. DUTY TO REAPPLY

The Permittee shall apply for permit renewal at least one hundred and eighty (180) days prior to the specified expiration date of this permit.

G8. TRANSFER OF THIS PERMIT

In the event of any change in control or ownership of facilities from which the authorized discharge emanate, the Permittee shall notify the succeeding owner or controller of the existence of this permit by letter, a copy of which shall be forwarded to the Department.

A. Transfers by Modification

Except as provided in paragraph (B) below, this permit may be transferred by the Permittee to a new owner or operator only if this permit has been modified or revoked and reissued under 40 CFR 122.62(b)(2), or a minor modification made under 40 CFR 122.63(d), to identify the new Permittee and incorporate such other requirements as may be necessary under the Clean Water Act.

B. Automatic Transfers

This permit may be automatically transferred to a new Permittee if:

- 1. The Permittee notifies the Department at least thirty (30) days in advance of the proposed transfer date.
- 2. The notice includes a written agreement between the existing and new permittees containing a specific date transfer of permit responsibility, coverage, and liability between them.
- 3. The Department does not notify the existing Permittee and the proposed new Permittee of its intent to modify or revoke and reissue this permit. A modification under this subparagraph may also be minor modification under 40 CFR 122.63. If this notice is not received, the transfer is effective on the date specified in the written agreement.

G9. REDUCED PRODUCTION FOR COMPLIANCE

The Permittee, in order to maintain compliance with its permit, shall control production and/or all discharges upon reduction, loss, failure, or bypass of the treatment facility until the facility is restored or an alternative method of treatment is provided. This requirement applies in the situation where, among other things, the primary source of power of the treatment facility is reduced, lost, or fails.

G10. REMOVED SUBSTANCES

Collected screenings, grit, solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of wastewaters shall not be resuspended or reintroduced to the final effluent stream for discharge to state waters.

G11. DUTY TO PROVIDE INFORMATION

The Permittee shall submit to the Department, within a reasonable time, all information which the Department may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The Permittee shall also submit to the Department upon request, copies of records required to be kept by this permit.

G12. OTHER REQUIREMENTS OF 40 CFR

All other requirements of 40 CFR 122.41 and 122.42 are incorporated in this permit by reference.

G13. ADDITIONAL MONITORING

The Department may establish specific monitoring requirements in addition to those contained in this permit by administrative order or permit modification.

G14. PAYMENT OF FEES

The Permittee shall submit payment of fees associated with this permit as assessed by the Department.

G15. PENALTIES FOR VIOLATING PERMIT CONDITIONS

Any person who is found guilty of willfully violating the terms and conditions of this permit shall be deemed guilty of a crime, and upon conviction thereof shall be punished by a fine of up to ten thousand dollars (\$10,000) and costs of prosecution, or by imprisonment in the discretion of the court. Each day upon which a willful violation occurs may be deemed a separate and additional violation.

Any person who violates the terms and conditions of a waste discharge permit shall incur, in addition to any other penalty as provided by law, a civil penalty in the amount of up to ten thousand dollars (\$10,000) for every such violation. Each and every such violation shall be a separate and distinct offense, and in case of a continuing violation, every day's continuance shall be deemed to be a separate and distinct violation.

G16. UPSET

Definition – "Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the Permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

An upset constitutes an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the requirements of the following paragraph are met.

A Permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
1) an upset occurred and that the Permittee can identify the cause(s) of the upset; 2) the permitted facility was being properly operated at the time of the upset; 3) the Permittee submitted notice of the upset as required in condition S3.E; and 4) the Permittee complied with any remedial measures required under S4.C of this permit.

In any enforcement proceeding the Permittee seeking to establish the occurrence of an upset has the burden of proof.

G17. PROPERTY RIGHTS

This permit does not convey any property rights of any sort, or any exclusive privilege.

G18. DUTY TO COMPLY

The Permittee shall comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.

G19. TOXIC POLLUTANTS

The Permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants within the time provided in the regulations that establish those standards or prohibitions, even if this permit has not yet been modified to incorporate the requirement.

G20. PENALTIES FOR TAMPERING

The Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than two (2) years per violation, or by both. If a conviction of a person is for a violation committed after a first conviction of such person under this Condition, punishment shall be a fine of not more than \$20,000 per day of violation, or by imprisonment of not more than four (4) years, or by both.

G21. REPORTING ANTICIPATED NONCOMPLIANCE

The Permittee shall give advance notice to the Department by submission of a new application or supplement thereto at least one hundred and eighty (180) days prior to commencement of such discharges, of any facility expansions, production increases, or other planned changes, such as process modifications, in the permitted facility or activity which may result in noncompliance with permit limits or conditions. Any maintenance of facilities, which might necessitate unavoidable interruption of operation and degradation of effluent quality, shall be scheduled during noncritical water quality periods and carried out in a manner approved by the Department.

G22. REPORTING OTHER INFORMATION

Where the Permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application, or in any report to the Department, it shall promptly submit such facts or information.

G23. COMPLIANCE SCHEDULES

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than fourteen (14) days following each schedule date.